BANGALORE MAHANAGARA PALIKE

DETAILED ESTIMATE FOR THE WORK OF **REMODELING OF SWD AND ITS ALLIED WORKS IN CRITICAL LOW LYING AREA (FLOOD PRONE AREA) AT BHADRAPPA LAYOUT, NAGASHETTYHALLI, SANJAYNAGAR IN YELHANKA ZONE (W-8)**

A. Cost of Construction of SWD BP026(BY03) Ch.0.00 to 505 mtrs **Est.Cost 15657000.00**

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
1	2	3	4	5	6	7	8	9
1	KSRRB M200-8 : Clearing and gurbbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees of girth upto 300mm, by manual means, in area of light jungle, removal of stumps, disposal of unserviceable materials, stacking of serviceable materials from road boundary, labour charges complete as per specifications. MORTH /Chapter 2 (Page No.143, Item No. 18.11)							
		1	600.00	4.00		2400.00		
						2400.00	4.86	11664.00
							Per Smtr	
	Basic Rate	4.50		4.20				
	Add 8% A.W	0.36						
	Total	4.86						
2	KSRRB M2100-5.1: Earth work in excavation for foundation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications. "V. Marshy soil - A.Manual Means upto 3 m depth . MORTH Specification No.304 (Page No.221, Item No. 27.12)							
		1	600.00	4.00	0.50	1200.00		
						1200.00	304.56	365472.00
							Per Cmtr	
	Basic Rate	282.00		265				
	Add 8% A.W	22.56						
	Total	304.56						
3	Sinking 100mm dia Bore holes in soils by manual auguring conducting standard penetration test at relevant death collecting disturbed and undisturbed soil samples where ever required for conducting necessary laboratory tests and sub mission of report including recommending suitable type of foundation sinking upto 6 mts or Refusal (N>50) whichever is earlier							
	for testing SBC of soil	1				1.00		
						1.00	4806.00	4806.00
							Nos	

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
4	Diversion of water course by providing Coffer dams or bunds or islands as may be necessary for piers and abutments foundations, bailing out or pumping water during excavation and until completion etc., compite. 1.50 mtrs depth below LWL (Page No.267, Item No. 37.41.1)							
		1	100.00	1.75	1.00	175.00		
						175.00	235.44	41202.00
							Per Cmtr	
	Basic Rate	218.00						
	Add 8% A.W	17.44						
	Total	235.44						
5	KSRRB M200-15.2 : Dismantling of existing structures like culverts, bridges retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work including T & P and scaffolding wherever necessary sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of 1000 metres complete as per specification.iii) Dismantling Stone Masonry. B.Rubble Stone masonry in cement mortar (Page No.145, Item No. 18.27)							
		1	200.00	0.60	1.50	180.00		
						180.00	194.40	34992.00
							Per Cmtr	
	Basic Rate	180.00						
	Add 8% A.W	14.40						
	Total	194.40						
6	KSRRB M2100-2.1 : Earth work in excavation for foundation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications. B. Mechanical Means (i) Depth upto 3 m. MORTH Specification No.Section 304 (Page No.220, Item No. 27.4)							
	Ch : 0 - 200	1	200.00	3.90	2.50	1950.00		
	Ch.400-505	1	105.00	6.10	2.80	1793.40		
	Deduction for existing drain							
	Ch.0 - 200	-1	200.00	1.00	0.75	-150.00		
	Ch.400-505	-1	105.00	3.00	1.50	-472.50		
	Total Qty. excavation					**3120.90**		
	a) In ordinary soil 50%					1560.45	40.99	63957.00

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
	Basic Rate		37.95				Per Cmtr	
	Add 8% A.W		3.04					
	Total		40.99					
	b) In ordinary rock 40%					1248.36	43.20	53929.00
							Per Cmtr	
	Basic Rate		40.00					
	Add 8% A.W		3.20					
	Total		43.20					
	c) In Hard rock 10%					312.09	456.84	142575.00
							Per Cmtr	
	Basic Rate		423.00					
	Add 8% A.W		33.84					
	Total		456.84					
7	Collecting, conveying, stacking and filling quarry (stone) grit (passing 6.3 mm size sieve and retained on 2.36mm) including watering and compacting in layers of 15 cms thick with all lead and lift and as directed by the Engineer incharge							
	for drain	5	5.00	1.50	0.15	5.63		
						5.63	1208.52	6798.00
							Per Cmtr	
	Basic rate for sand filling in foundation PWP & IWTD 2011-12 (Page No.221, I.No.27.14)		1599.00					
	Deduct cost of sand (P.II, I.No.28)		950.00					
	Deduct 10% over head charges.P.c.Note 6.0		95.00					
	Deduct 10% contractor's profit		95.00					
	Balance		**459.00**					
	Add cost of Crushed stone chipping 5-6mm downsize (PWP & IWTD 11-12, P.1, I.No.24)		550.00					
	Add 10% over head charges PC Note.6		55.00					
	Add 10% contractor profit		55.00					
			1119.00					
	Add A.W.8%		89.52					
			1208.52					
8	KSRB 2.8 : Providing and Filling in foundation with granite/trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with lead upto 50m and lift of 1.5m complete as per specifications.Specification No.KBS (Page No.6, Item No. 2.15)							

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
	for drain							
	Ch.0 - 200	1	200.00	3.90	0.30	234.00		
	Ch.400-505	1	105.00	6.10	0.30	192.15		
						426.15	1143.72	487396.00
							Per Cmtr	
	Basic Rate	1059.00		1051				
	Add 8% A.W	84.72						
	Total	1143.72						
9	KSRRB M2100-10 : Plain cement concrete M 10 with OPC cement @ 220 kgs with crushed 40m and down size graded grantie metal coarse aggregates @ 0.84 cum and fine aggregates @ 0.56 cum in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days complete as per specifications. MORTH Specification No.2100 (Page No.222, Item No. 27.18)							
	Ch.0 - 200	1	200.00	3.30	0.10	66.00		
	Ch.400-505	1	105.00	5.50	0.10	57.75		
						123.75	4190.40	518562.00
							Per Cmtr	
	Basic Rate	3880.00		4020				
	Add 8% A.W	310.40						
	Total	4190.40						
10	KSRRB M2100-17.2 : Plain / Reinforced Cement concrete idesign mix M 25 with OPC cement @ 340 kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.70 cum and fine aggregates @ 0.47 cum with superplastisiser @ 3lts confirming to IS 9103-1999 Reaffirmed-2008 in open foundation complete as per drawing and technical specification. Case-II : With Batching Plant, Transit Mixer and Concrete Pump.MORTH Specification No.1500, 1700 & 2100 (Page No.223, Item No. 27.31)							
	Ch.400-505	1	105.00	5.30	0.35	194.78		
						194.78	4609.44	897804.00
							Per Cmtr	
	Basic Rate	4268.00		4579				
	Add 8% A.W	341.44						
	Total	4609.44						
11	KSRRB M2200-5.12 : Design mix M 25 with OPC cement @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.7cum and fine aggregates @ 0.47 cum, with superplastisiser @ 3lts confirming to IS9103-1999 Reaffirmed-2008 i) upto 5m height (Page No.227, Item No. 28.7.12)							

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
	for drain side walls for trapezoidal section							
	Ch.400-505	2	105.00	0.30	0.75	47.25		
	for uniform section							
	Ch.400-505	2	105.00	0.25	1.55	81.38		
						128.63	5134.32	660402.00
							Per Cmtr	
	Basic Rate	4754.00						
	Add 8% A.W	380.32						
	Total	5134.32						
12	KSRRB M2100-20.2 : Plain / Reinforced Cement concrete in open foundation with OPC cement design mix M35 @ 390 kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.68 cum and fine aggregates @ 0.45 cum with superplastisiser @ 3lts confirming to IS 9103-1999 Reaffirmed-2010complete as per drawing and technical specification. Case-II : With Batching Plant, Transit Mixer and Concrete Pump. MORTH Specification No.1500, 1700 & 2100 (Page No.224, Item No. 27.37)							
	for bottom raft 0 - 200	1	200.00	3.10	0.30	186.00		
						186.00	4918.32	914808.00
							Per Cmtr	
	Basic Rate	4554.00						
	Add 8% A.W	364.32						
	Total	4918.32						
13	KSRRB M2200-5.18 : Design mix M 35 with OPC cement @ 390kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.68cum and fine aggregates @ 0.45 cum, with superplastisiser @ 3lts confirming to IS9103-1999 Reaffirmed-2008 i) upto 5m height (Page No.228, Item No. 28.7.18)							
	for side walls for box 0 - 200	2	200.00	0.25	1.50	150.00		
	Haunches	2	250.00	0.02		10.00		
						160.00	5489.64	878342.00
							Per Cmtr	
	Basic Rate	5083.00						
	Add 8% A.W	406.64						
	Total	5489.64						

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
14	KSRRB M2300-8.1 : Furnishing and Placing Reinforced / Prestressed cement concrete in super-structure as per drawing and Technical Specification complete as per specifications. D.RCC/PSC with OPC cement design mix M35 @ 390kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.68cum and fine aggregates @ 0.45cum, with superplastisiser @ 3lts confirming to IS9103-1999 Reaffirmed-2008. Case-II : Using Batching plant, Transit mixer & concrete pump Height upto 5m (Page No.237, Item No. 29.16.1)							
	Top slab ch. 0 - 200	1	200.00	2.50	0.30	150.00		
	Haunches	2	200.00	0.02		8.00	5511.00	
						158.00	5598.72	884598.00
							Per Cmtr	
	Basic Rate	5184.00						
	Add 8% A.W	414.72						
	Total	5598.72						
15	KSRRB M2200-6: Supplying, fitting and placing TMT bar reinforcement in sub-structure as per drawing and Technical Specifications complete as per specifications. MORTH Specification No.1600 & 2200 (Page No.229, Item No. 28.8)							
	For raft 110 kg/cum					41.89		
	for side walls					28.86	63128	
						70.75	58938.84	4169790.00
							Per MT	
	Basic Rate	54573.00						
	Add 8% A.W	4365.84						
	Total	58938.84						
16	KSRRB M2300-14 : Supplying, fitting and placing TMT bar reinforcement in super-structure complete as per drawing and technical specifications complete as per specifications. MORTH specification No.1600 (Page No.241, Item No. 29.29)							
	for top slab					17.38	63785	
						17.38	59678.64	1037215.00
							Per MT	
	Basic Rate	55258.00						
	Add 8% A.W	4420.64						
	Total	59678.64						

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
17	Providing 110mm dia PVC pipes 6 KSC) with porous plug in 1:4 with aggregate of size 10mm - 3mm including geotextile fabric cover in plain concrete / reinforced concrete including cost and conveyance of all materials, labour, lead and lift etc., complete and as directed by the Engineer in charge							
	For box drain raft PVC pipe 0.75 Mts	10.00				**10.00**	235.00	2350.00
	for walls PVC pipe 0.5 mtr	500.00				**500.00**	183.25	91625.00
							Per No.	
18	KSRRB M2600-4 : (iii) Providing and fixing in position 20mm thick premoulded joint filler in expansion joint for fixed ends of simply supported spans not exceeding 10m to cater for a horizontal movement upto 20mm covered with sealant complete as per drawing & Technical specification complete as per specifications. MORTH specification No.2605 (Page No.246, Item No. 31.4)							
		10	6.00			60.00	158	
						60.00	171.72	10303.00
							Per mtr	
	Basic Rate	159.00						
	Add 8% A.W	12.72						
	Total	171.72						
19	KSRRB M2200-9: Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2500.4.2.2 of MORTH specifications to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and Technical specification complete as per specifications. MORTH Specification No.710.1.4 of IRC : 78 & 2200 (Page No.229, Item No. 28.13)							
	Both side of drain wall	2	280.00	0.60	1.50	504.00	602	
						504.00	665.28	335301.00
							Per Cmtr	
	Basic Rate	616.00		602				
	Add 8% A.W	49.28						
	Total	665.28						
20	Collecting, conveying and disposal of surplus / excavated earth to designated dupmping site (15.00 kms) as directed by the Engineer in charge.							

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
	Excavated surplus earth					960.00		
						960.00	108.65	104302.00
							Per Sqm	
	Basic Rate	38.40						
	Loading & Unloading	62.20						
	Total	100.60						
	Add 8% A.W	8.05						
	Total	108.65						
	Bed Protection							
21	KSRRB M2100-2.1 : Earth work in excavation for foundation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications. B. Mechanical Means (i) Depth upto 3 m. MORTH Specification No.Section 304 (Page No.220, Item No. 27.4)							
	Ch.200-400	1	200.00	4.00	0.45	360.00		
	for recharge pits	25	1.75			43.75		
						403.75	40.99	16548.00
	Basic Rate	37.95		37.35			Per Cmtr	
	Add 8% A.W	3.04						
	Total	40.99						
22	KSRB 2.8 : Providing and Filling in foundation with granite/trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with lead upto 50m and lift of 1.5m complete as per specifications.Specification No.KBS (Page No.6, Item No. 2.15)							
	Ch.200-600	1	200.00	4.00	0.30	240.00		
	for recharge pits	-50	0.34			-17.00		
						223.00	1143.72	255050.00
							Per Cmtr	
	Basic Rate	1059.00		1051				
	Add 8% A.W	84.72						
	Total	1143.72						
23	Supplying and placing in position as per drawing, Precast RCC Ring-1200 mm dia 300mm depth and 75mm thick of M20 grade including cost of all materials and labour, transportation etc., complete and as directed by the Engineer in charge							

Sl. No.	Description	Dimensions No.	L.	B.	D	Qty.	Rate / Unit	Amount
		50				50.00		
						50.00	2047.68	102384.00
							Nos	
	Cost of precast RCC NP2 ring is 5605/-mtr 1/3 o this rate is taken for 900mm dia	1835.00						
	Labour charges for handling and placing L/S	61.00						
		1896.00						
	Add A.W. 8%	151.68						
		2047.68						
24	KSRRB M2200-9: Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2500.4.2.2 of MORTH specifications to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and Technical specification complete as per specifications. MORTH Specification No.710.1.4 of IRC : 78 & 2200 (Page No.229, Item No. 28.13)							
		50	2.26			113.00		
						113.00	665.28	75177.00
							Per Cum	
	Basic Rate	616.00	602					
	Add 8% A.W	49.28						
	Total	665.28						
25	KSRRB M2100-15.1 : Plain / Reinforced Cement concrete M 20 with OPC cement @ 320 kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregates @ 0.46 cum with superplastisiser @ 3lts confirming to IS 9103-1999 Reaffirmed-2008 in open foundation complete as per drawing and technical specification. C. RCC Grade M-20. Case-I. Using Concrete Mixer. MORTH Specification No.1500, 1700 & 2100 (Page No.222, Item No. 27.26)							
	Ch.200-600	1	400.00	4.00	0.10	160.00		
	for recharge pits	-50	0.11			-5.50		
						154.50	4707.72	727343.00
							Per Cmtr	
	Basic Rate	4359.00	4574					
	Add 8% A.W	348.72						
	Total	4707.72						

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
26	KSRRB M2200-6: Supplying, fitting and placing TMT bar reinforcement in sub-structure as per drawing and Technical Specifications complete as per specifications. MORTH Specification No.1600 & 2200 (Page No.229, Item No. 28.8)							
	For bed protection 5kg / sqm	1		6.87		6.87	8128	
						6.87	58938.84	404910.00
							Per MT	
	Basic Rate	54573.00						
	Add 8% A.W	4365.84						
	Total	58938.84						
27	Providing fixing of steel gratings (750 x 750) including cost of all materials and labour with all lead and lift as per drawing and technical specification or as directed by the Engineer incharge							
		2				2.00		
						2.00	11000.00	22000.00
							Nos	
B	**Cost of Construction RCC Box Culvert C1 Across BP026 (BY03) Ch:**							
28	KSRRB M200-8 : Clearing and gurbbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees of girth upto 300mm, by manual means, in area of light jungle, removal of stumps, disposal of unserviceable materials, stacking of serviceable materials from road boundary, labour charges complete as per specifications. MORTH /Chapter 2 (Page No.143, Item No. 18.11)							
		1	18.00	3.00		54.00		
						54.00	4.86	262.00
	Basic Rate	4.50		4.20			Per Smtr	
	Add 8% A.W	0.36						
	Total	4.86						
29	Sinking 100mm dia Bore holes in soils by manual auguring conducting standard penetration test at relevant death collecting disturbed and undisturbed soil samples where ever required for conducting necessary laboratory tests and sub mission of report including recommending suitable type of foundation sinking upto 6 mts or Refusal (N>50) whichever is earlier							
		1				1.00		
						1.00	4806.00	4806.00
							Per No	
30	Diversion of water course by providing Coffer dams or bunds or islands as may be necessary for piers and abutments foundations, bailing out or pumping water during excavation and until completion etc., complte. 1.50 mtrs depth below LWL (Page No.267, Item No. 37.41.1)							

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
		1	10.00	1.75	1.00	17.50		
						17.50	235.44	4120.00
							Per Cmtr	
	Basic Rate	218.00		213				
	Add 8% A.W	17.44						
	Total	235.44						
31	KSRRB M200-15.2 : Dismantling of existing structures like culverts, bridges retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work including T & P and scaffolding wherever necessary sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of 1000 metres complete as per specification.iii) Dismantling Stone Masonry. B.Rubble Stone masonry in cement mortar (Page No.145, Item No. 18.27)							
	Existing walls	2	7.50	0.60	2.00	18.00		
	covered slabs	1	7.50	1.50	0.25	2.81		
						18.00	194.40	3499.00
							Per Cmtr	
	Basic Rate	180.00		170				
	Add 8% A.W	14.40						
	Total	194.40						
32	KSRRB M200-12.2: Dismantling of existing structures like culverts, bridges retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work including T & P and scaffolding wherever necessary sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of 1000 metres complete as per specification. i) Lime/Cement concrete. I.By Manual means : A. Lime/Cement Concrete, I.By Manual means : B cement concrete Grade M-15 & M-20 (Page No.144, Item No. 18.18)							
		1	7.50	2.00	0.20	3.00		
						3.00	293.76	881.00
	Basic Rate	272.00		256			Per Cmtr	
	Add 8% A.W	21.76						
	Total	293.76						

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
33	KSRRB M2100-2.1 : Earth work in excavation for foundation of structures as per drawing and technical specifications, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material complete as per specifications. B. Mechanical Means (i) Depth upto 3 m. MORTH Specification No.Section 304 (Page No.220, Item No. 27.4)							
	Culvert portion	1	9.20	5.40	4.20	208.66		
	for approach slab	2	8.50	3.50	0.45	26.78		
	for U Shape retaining wall	2	5.00	5.10	3.70	188.70		
	Deduction for existing vent	-1	9.20	3.00	1.50	-41.40		
	Deduction for existing vent drain	-2	5.00	2.00	1.50	-30.00		
						352.73		
					Total	**352.73**		
	a) In ordinary soil					176.37	40.99	7229.00
	Basic Rate	37.95		39.35			Per Cmtr	
	Add 8% A.W	3.04						
	Total	40.99						
	b) In ordinary rock (not requiring blasting) upto 3 m depth by Mechanical means					88.18	43.20	3809.00
							Per Cmtr	
	Basic Rate	40.00		42.50				
	Add 8% A.W	3.20						
	Total	43.20						
	c) In Hard rock (blasting prohibited) upto 3m depth by Mechanical					88.18	456.84	40285.00
							Per Cmtr	
	Basic Rate	423.00		291.00				
	Add 8% A.W	33.84						
	Total	456.84						
34	KSRB 2.8 : Providing and Filling in foundation with granite/trap broken metal 100mm. and down size, with approved sand including hand packing, ramming, watering, including cost of all materials and labour with lead upto 50m and lift of 1.5m complete as per specifications.Specification No.KBS (Page No.6, Item No. 2.15)							
	culvert portion	1	9.20	5.40	0.30	14.90		
	for U shape Drain	2	5.00	5.10	0.30	15.30		
						30.20	1143.72	34545.00
							Per Cmtr	

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
	Basic Rate	1059.00		1051				
	Add 8% A.W	84.72						
	Total	1143.72						
35	KSRRB M2100-10 ; Plain cement concrete M 10 with OPC cement @ 220 kgs with crushed 40m and down size graded grantie metal coarse aggregates @ 0.84 cum and fine aggregates @ 0.56 cum in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days complete as per specifications. MORTH Specification No.2100 (Page No.222, Item No. 27.18)							
	Culvert portion	1	8.60	4.80	0.10	4.13		
		2	5.00	4.50	0.10	4.50		
						8.63	4190.40	36155.00
							Per Cmtr	
	Basic Rate	3880.00		4020				
	Add 8% A.W	310.40						
	Total	4190.40						
36	KSRRB M2700-6 : PCC M15 Grade leveling course below approach slab complete as per drawings and technical specifications complete as per specifications. MORTH specification No.2700 (Page No.250, Item No. 32.6)							
		2	7.80	3.50	0.15	8.19		
						8.19	4275.72	35018.00
							Per Cmtr	
	Basic Rate	3959.00		4082				
	Add 8% A.W	316.72						
	Total	4275.72						
37	Collecting, conveying, stacking and filling quarry (stone) grit (passing 6.3 mm size sieve and retained on 2.36mm) including watering and compacting in layers of 15 cms thick with all lead and lift and as directed by the Engineer incharge							
	for drain	2	3.00	2.00	0.20	2.40		
						2.40	1208.52	2900.00
							Per Cmtr	
	Basic rate for sand filling in foundation PWP & IWTD 2011-12 (Page No.221, I.No.27.14)	1599.00		1582				
	Deduct cost of sand (P.II. I.No.28)	950.00						
	Deduct 10% over head charges.P.c.Note 6.0	95.00						
	Deduct 10% contractor's profit	95.00						

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
	Balance	459.00						
	Add cost of Crushed stone chipping 5-8mm downsize (PWP & IWTD 11-12, P.1, I.No.24)	550.00						
	Add 10% over head charges PC Note.6	55.00						
	Add 10% contractor profit	55.00						
		1119.00						
	Add A.W.8%	89.52						
		1208.52						
38	KSRRB M2100-15.1 : Plain / Reinforced Cement concrete M 20 with OPC cement @ 320 kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregates @ 0.46 cum with superplastisiser @ 3lts confirming to IS 9103-1999 Reaffirmed-2008 in open foundation complete as per drawing and technical specification. C. RCC Grade M-20. Case-I. Using Concrete Mixer. MORTH Specification No.1500, 1700 & 2100 (Page No.222, Item No. 27.26)							
	culvert portion	1	8.40	3.00	0.10	2.52		
	for U shape Drain	2	5.00	3.00	0.10	3.00		
						5.52	4707.72	25987.00
							Per Cmtr	
	Basic Rate	4359.00						
	Add 8% A.W	348.72						
	Total	4707.72						
39	KSRRB M2100-20.2 : Plain / Reinforced Cement concrete in open foundation with OPC cement design mix M35 @ 390 kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.68 cum and fine aggregates @ 0.45 cum with superplastisiser @ 3lts confirming to IS 9103-1999 Reaffirmed-2010complete as per drawing and technical specification. Case-II : With Batching Plant, Transit Mixer and Concrete Pump. MORTH Specification No.1500, 1700 & 2100 (Page No.224, Item No. 27.37)							
	Culvert Raft	1	8.40	4.60	0.40	15.46		
		2	4.60	0.56		5.15		
						20.61	4918.32	101357.00
							Per Cmtr	
	Basic Rate	4554.00						
	Add 8% A.W	364.32						
	Total	4918.32						

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
40	KSRRB M2200-5.18 : Design mix M 35 with OPC cement @ 390kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.68cum and fine aggregates @ 0.45 cum, with superplastisiser @ 3lts confirming to IS9103-1999 Reaffirmed-2008 i) upto 5m height (Page No.228, Item No. 28.7.18)							
	Culvert walls	2	8.40	0.30	3.00	15.12		
	Bracket to rest approach slab	2	8.40	0.135		2.27		
	Hauncges	2	8.40	0.01		0.17		
						17.56	5489.64	96376.00
							Per Cmtr	
	Basic Rate	5083.00		5366				
	Add 8% A.W	406.64						
	Total	5489.64						
41	KSRRB M2300-8.1 : Furnishing and Placing Reinforced / Prestressed cement concrete in super-structure as per drawing and Technical Specification complete as per specifications. D.RCC/PSC with OPC cement design mix M35 @ 390kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.68cum and fine aggregates @ 0.45cum, with superplastisiser @ 3lts confirming to IS9103-1999 Reaffirmed-2008. Case-II : Using Batching plant, Transit mixer & concrete pump Height upto 5m (Page No.237, Item No. 29.16.1)							
	For Slab portion	1	8.40	3.60	0.40	12.10		
	For Haunches	2	8.40	0.010		0.17		
	For crash barrier	2	3.60	0.32		2.30		
	For utility crossing	2	3.60	0.70	0.20	1.01		
		2	3.60	0.20	0.20	0.29		
						15.86	5598.72	88818.00
	Basic Rate	5184.00		5511			Per Cmtr	
	Add 8% A.W	414.72						
	Total	5598.72						
42	KSRRB M2100-17.2 : Plain / Reinforced Cement concrete idesign mix M 25 with OPC cement @ 340 kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.70 cum and fine aggregates @ 0.47 cum with superplastisiser @ 3lts confirming to IS 9103-1999 Reaffirmed-2008 in open foundation complete as per drawing and technical specification. Case-II : With Batching Plant, Transit Mixer and Concrete Pump.MORTH Specification No:1500, 1700 & 2100 (Page No.223, Item No. 27.31)							
	For Drain raft	2	5.00	4.20	0.30	12.60		
						12.60	4609.44	58079.00
							Per Cmtr	

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
	Basic Rate		4266.00					
	Add 8% A.W		341.44					
	Total		4609.44					
43	KSRRB M2200-5.12 : Design mix M 25 with OPC cement @ 340kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.7cum and fine aggregates @ 0.47 cum, with superplastisiser @ 3lts confirming to IS9103-1999 Reaffirmed-2008 i) upto 5m height (Page No.227, Item No. 28.7.12)							
	For Trapezoidal sections	4	5.00	0.28	0.75	4.20		
	For uniform section	4	5.00	0.25	2.55	12.75		
						16.95	5134.32	87027.00
							Per Cmtr	
	Basic Rate		4754.00					
	Add 8% A.W		380.32					
	Total		5134.32					
44	KSRRB M2200-6: Supplying, fitting and placing TMT bar reinforcement in sub-structure as per drawing and Technical Specifications complete as per specifications. MORTH Specification No.1600 & 2200 (Page No.229, Item No. 28.8)							
	For foundation @ 120kg/cum			3.98		3.98		
	For Substructure @ 100kg/cum			3.45		3.45		
						7.43	58938.84	437916.00
							Per MT	
	Basic Rate		54573.00					
	Add 8% A.W		4365.84					
	Total		58938.84					
45	KSRRB M2300-14 : Supplying, fitting and placing TMT bar reinforcement in super-structure complete as per drawing and technical specifications complete as per specifications. MORTH specification No.1600 (Page No.241, Item No. 29.29)							
	For Culvert slab @ 120kg/ cum			1.91		1.91		
						1.91	59678.64	113986.00
							Per MT	
	Basic Rate		55258.00					
	Add 8% A.W		4420.64					
	Total		59678.64					

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
46	Providing 110mm dia PVC pipes 6 KSC) with porous plug in 1:4 with aggregate of size 10mm - 3mm including geotextile fabric cover in plain concrete / reinforced concrete including cost and conveyance of all materials, labour, lead and lift etc., complete and as directed by the Engineer in charge							
	for walls 0.45 mtr pipe	2.00	19.00			**38.00**	172.90	6570.00
	for base 0.75 mtr pipe	1.00	6.00			**6.00**	235.00	1410.00
							Per Rmt	
47	KSRRB M2700-5 : Drainage Spouts complete as per drawings and technical specifications complete as per specifications. MORTH specification No.2705 (Page No.250, Item No. 32.5)							
		2				2.00		
						2.00	1216.08	2432.00
							Per No	
	Basic Rate	1126.00						
	Add 8% A.W	90.08						
	Total	1216.08						
48	KSRRB M2700-7 : Reinforced cement concrete M30 approach slab including reinforcement and form work complete as per drawings and technical specifications complete as per specifications.MORTH specification No.1500, 1600, 1700, & 2704 (Page No.250, Item No. 32.7)							
		2	7.50	3.50	0.30	15.75		
						15.75	8009.28	126146.00
	Basic Rate	7416.00					Per cum	
	Add 8% A.W	593.28						
	Total	8009.28						
49	KSRRB M2200-9: Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2500.4.2.2 of MORTH specifications to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and Technical specification complete as per specifications. MORTH Specification No.710.1.4 of IRC : 76 & 2200 (Page No.229, Item No. 28.13)							
		2	18.40	0.60	2.50	55.20		
						55.20	665.28	36723.00
							Per cum	

Sl. No.	Description	Dimensions				Qty.	Rate /	Amount
		No.	L.	B.	D		Unit	
	Basic Rate		616.00	602				
	Add 8% A.W		49.28					
	Total		665.28					
50	KSRRB M2600-4 : (iii) Providing and fixing in position 20mm thick premoulded joint filler in expansion joint for fixed ends of simply supported spans not exceeding 10m to cater for a horizontal movement upto 20mm covered with sealant complete as per drawing & Technical specification complete as per specifications. MORTH specification No.2605 (Page No.246, Item No. 31.4)							
	U Shape drain	2	6.00			12.00		
						12.00	171.72	2061.00
	Basic Rate		159.00	158			Per Mtr	
	Add 8% A.W		12.72					
	Total		171.72					
51	KSRRB 500-4 : Providing and applying primer coat from 7.5 to 9.8 kg and 9.8 to 12.2 kg per 10 sqm for surfaces of low and medium porosity respectively over prepared surface of granular base with cut back M.C.70 or any other bitumen mixed with diesel at 10kg per 10 sqm heated in bitumen boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications. medium porosity MORTH / Chapter 5 (Page No.171, Item No. 21.4.2)							
	U Shape drain	1	10.60	7.50		79.50		
						79.50	74.47	5920.00
	Basic Rate		68.95	75.80			Per Sqm	
	Add 8% A.W		5.52					
	Total		74.47					
52	KSRRB M500-41 : Providing and laying 25mm thick mastic asphalt wearing course with paving grade bitumen meeting the requirements given in table 500-29, prepared by using mastic cooker and laid to required level and slope after cleaning the surface, including providing antiskid surface with bitumen precoated finegranied hard stone chipping of 13.2 mm nominal size at the rate of 0.005 cum per 10 sqm and at an approximate spacing of 10cm center to center in both directions, pressed into surface when the temperature of surfaces is not less than 1000C, protuding 1mm to 4mm over mastic surface all complete as per clause 500.15 as per specifications. MORTH Specification No.515 (Page No.179, Item No. 21.47)							

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
		1	10.60	7.50		79.50		
						79.50	469.80	37349.00
							Per Sqm	
	Basic Rate	435.00		434.65				
	Add 8% A.W	34.80						
	Total	469.80						
53	KSRRB 500-8 : Providing and applying tack coat on granular surface treated with primer at 3 kg per 10 sqm heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.MORTH / Chapter 5 (Page No.172, Item No. 21.8)							
		1	10.60	27.50		291.50		
						291.50	17.31	5047.00
							Per Sqm	
	Basic Rate	16.03		19.20				
	Add 8% A.W	1.28						
	Total	17.31						
54	KSRRB M500-19 : Providing and laying bituminous concrete 40mm thick with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder at 5.4 to 5.6% of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No.500.9 complete in all respects as per specifications. with NRMB 70 (LATEX OR RUBBER POWDER) (Page No.175, Item No. 21.23.2)							
	For wearing coat	1	10.60	7.50	0.04	3.18		
						3.18	8094.60	25741.00
							Per Cum	
	Basic Rate	7495.00		8317				
	Add 8% A.W	599.60						
	Total	8094.60						
55	Providing 80 NB MS Pipe on crash barrier with plates, inserts, and anticorossive paint on primer coat, etc., complete as per drawing and Technical specifications and as directed by the Engineer in charge							

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
		2	3.60			7.20		
						7.20	800.00	5760.00
							Per Mtr	
	Basic Rate	7495.00						
	Add 8% A.W	599.60						
	Total	8094.60						
56	KSRRB M800-6 : Painting two coats on New Concrete Surface:- Painting two coats after filling the surface with synthetic enamel paint in all shades on new plastered concrete surfaces complete as per specifications. MORTH Specification No.803 (Page No.192, Item No. 24.7)							
		4	3.60		1.10	15.84		
						15.84	54.27	860.00
							Per Sqm	
	Basic Rate	50.25		49.10				
	Add 8% A.W	4.02						
	Total	**54.27**						
57	KSRRB 300-49 : Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by manual means without disturbing the base and stacking of the debris materials within a lead of 100 mtrs including cost of all labour charges complete as per specifications. MORTH / Chapter 3 (Page No.155, Item No. 19.55)							
		2	10.00	7.50		150.00		
						150.00	43.52	6529.00
							Per Sqm	
	Basic Rate	40.30		38.40				
	Add 8% A.W	3.22						
	Total	43.52						
58	KSRRB 300-45 : Scarifying stone metal crust 50mm to 100mm thick with pick axes along with premix carpet / surface dressing and stackign of old serviceable materials within a lead of 100 metres by manual means including cost of all labour charges complete as per specifications. MORTH / Chapter 3 (Page No.155, Item No. 19.51)							
		2	10.00	7.50		150.00		
						150.00	38.66	5800.00
							Per Sqm	
	Basic Rate	35.80		33.25				
	Add 8% A.W	2.86						
	Total	38.66						

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
59	KSRRB 300-53 : Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300-2 complete as per specifications (which includes cost of gravel/murrum watering charges & compaction by vibratory roller) MORTH specifications No.305 (Page No.156, Item No. 19.60)							
		2	10.00	8.50	0.30	51.00		
						51.00	146.88	7491.00
							Per cum	
	Basic Rate	136.00						
	Add 8% A.W	10.88						
	Total	146.88						
60	KSRRB M400.14.1 : Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with 3 wheeled steel / vibratory roller 8-10 tonnes in stages to proper grade and camber, applying and brooming requisite type of screening / binding materials to fill up the interstices of coarse agreegate, watering and compacting to the required density complete as per specification.A by Manual means. Type A 13.2mm for grading II. MORTH Specification No.404 (Page No.166, Item No. 20.14.1)							
		2	10.00	7.90	0.15	23.70		
						23.70	1308.96	31022.00
							Per Cum	
	Basic Rate	1212.00						
	Add 8% A.W	96.96						
	Total	1308.96						
61	KSRRB M400.14.1 : Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with 3 wheeled steel / vibratory roller 8-10 tonnes in stages to proper grade and camber, applying and brooming requisite type of screening / binding materials to fill up the interstices of coarse agreegate, watering and compacting to the required density complete as per specification.A by Manual means. Type B 11.2mm for grading III. MORTH Specification No.404 (Page No.166, Item No. 20.14.3)							

Sl. No.	Description	Dimensions				Qty.	Rate / Unit	Amount
		No.	L.	B.	D			
		2	10.00	7.90	0.10	15.80		
						15.80	1480.68	23395.00
							Per Cum	
	Basic Rate	1371.00		1358				
	Add 8% A.W	109.68						
	Total	1480.68						
62	KSRRB M500-13 : Providing and laying bituminous macadam 50mm thick with 100-120 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with bituminous binder, transported to site, laid over a previously prepared surface with paver finisher to the required grade, level and alignment and rolled as per Clauses 501.6 and 501.7 to achieve the desired compaction complete as per specification. 80 - 100 mm compacted thickness (grading I) with 3.1% bitumen MORTH specification No.504 (Page No.172, Item No. 21.13.1)							
		2	10.00	7.50	0.05	7.50		
						7.50	5410.80	40581.00
							Per Cum	
	Basic Rate	5010.00		5057				
	Add 8% A.W	400.80						
	Total	5410.80						
63	KSRRB 500-10 : Tack Coat:- Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom complete as per specifications using bitumen emulsion. MORTH Specification No.503 (Page No.172, Item No. 21.10.1)							
		1	10.00	7.50		75.00		
						75.00	9.94	745.00
							Per Sqm	
	Basic Rate	9.20		10				
	Add 8% A.W	0.74						
	Total	9.94						
64	KSRRB M500-38.1 : Providing, laying and rolling of close-graded premix surfacing material of 20mm thickness composed of 13.2 mm to 0.09 mm (Type - b) aggregates using penetration grade bitumen to the required line, grade and level to serve as wearing course on a							

No.	Description	Dimensions No.	L.	B.	D	Qty.	Rate / Unit	Amount
	previously prepared base, including mixing in a suitable plant, laying with Paver and rolling with a Smooth wheeled roller 8-10 tonne capacity, and finishing to required level and grade complete as per specifications. MORTH Specification No.512 (Page No.178, Item No. 21.44)					150.00		
		2	10.00	7.50		150.00	126.79	19019.00
							Per Sqm	
	Basic Rate	117.40						
	Add 8% A.W	9.39						
	Total	126.79						
65	Collecting, conveying and disposal of surplus / excavated earth to designated dupmping site (15.00 kms) as directed by the Engineer in charge.					141.09		
						141.09	108.65	15329.00
							Per Cum	
	Basic Rate	38.40						
	Loading & Unloading	62.20						
	Total	100.60						
	Add 8% A.W	8.05						
	Total	108.65						
							SUB TOTAL Rs.	14910590.00
							Miscellaneous, Utility Charges + PMC Charges	746410.00
							TOTAL Rs.	15657000.00

1 **CERTIFICATE**

2 The work spot has been inspected and the work is found to be necessary.

3 The Estimate is prepared as per the PW, P & WTD SR 2011-12 & KUWS&DB SR 2011-12

The provision made in estimate are adequate and essential.

Assistant Engineer
SWD, Yelahanka Zone
BBMP, Bangalore

Asst.Executive Engineer
SWD, Yelahanka Zone,
BBMP, Bangalore

Executive Engineer
SWD, Yelahanka Zone
BBMP, Bangalore

Administrative sanction for Rs. 156.57 Lakhs
(Rs. One Crore fifty six Lakhs fifty seven thousand only
is accorded under P 2350 Remodeling of Challaghatta valley (Non Tenuram works)
Registered as 50/12-13
conditions enclosed memo
No. CE/SWD/AE(SO)/12-13 Dt. 18/4/2012

Technically sanctioned for Rs. 156.57 Lakhs
Rs. One Crore fifty six lakhs fifty seven thousand only
under P 2350 Remodeling of Challaghatta valley (Non-Tenuram works)
Registered as 50/12-13
to conditions contained in enclosed memo
No. CE/SWD/TS/50/12-13 Dt. 18/4/2012